



# Immunization Update

The Iowa Immunization Program

Chester J. Culver, Governor • Thomas Newton, Director, IDPH

January 2009

Volume 1, Issue 10

Don Callaghan, Chief  
Bureau of Immunization and TB

Mary Jones, Director  
Division of Acute Disease  
Prevention and Emergency  
Response



**Call the IRIS  
Help Desk at  
1-800-374-3958  
for Enrollment Details or**

The Immunization Update is  
available on the Web at:

[www.idph.state.ia.us/adper/  
immunization.asp](http://www.idph.state.ia.us/adper/immunization.asp)

## Inside This Issue

Iowa Immunization Law Changes	1
Influenza—Nothing to Sneeze At!	3
The Problem with Dr. Bob's Alternative Vaccination Schedules	4
2009 Childhood Immunization Schedule	5
2009 Adult Immunization Schedule	6
PedvaxHib Shortage Continues	6
Vaccines with Multiple Lot Numbers	6
Immunization Law Charts	7- 8

## Immunization Law Changes go Into Effect

On December 4<sup>th</sup>, 2008, providers were notified by e-mail of changes to Iowa's Immunization Law. **The changes made to the Iowa Administrative Code, Chapter 7,** which discuss required vaccines for children in licensed child care and schools **became effective January 7, 2009.**

As of January 7, 2009, all children in licensed child care must have protection from invasive pneumococcal disease. Prevnar is the only vaccine available in the U.S. at this time for this disease and age group.

Prevnar vaccine is age and dose dependent. The recommended schedule includes doses at 2, 4, and 6 months with a booster dose at 12-15 months of age. However, if a child

is off schedule four doses may not be required. See pages 7 and 8 for charts to assist in determining the number of doses each child must receive to comply with Iowa Law.

Children entering kindergarten in September 2009, who were born on or after September 15, 2003, are required to receive a fifth dose of DTaP, a fourth dose of Polio, and a second dose of Varicella - unless the applicant has a reliable history of natural varicella disease.

The Iowa Immunization Certificate, Provisional Certificate, and Certificate of Immunization Exemption (medical and religious) have been updated to reflect these changes. *Continued on page 2*

## The "Immunization Update" is Going Electronic!

As of January 1, 2009, the IDPH Immunization Program newsletter, the "Immunization Update," will only be available electronically through our Web page.

With the desire to quickly get the most current immunization information out to Iowa providers we have changed our format from printed paper to electronic. We will send quarterly reminder e-mails to all VFC providers and IRIS users who have current e-mail addresses in our state database when a new issue of the Immunization Update is available. Our Web page:

<http://www.idph.state.ia.us/adper/immunization.asp> has a designated section for the Immunization Newsletter where current and all previous issues can be

found and shared with clinic staff. We encourage clinics to print a newsletter and place it in break rooms, front desks, or other places where staff gather so they can review the newsletter.



The Immunization Program will continue to use the electronic newsletter format to educate Iowa providers of changes to the Vaccines for Children (VFC) Program and other current immunization recommendations and news.

If you have questions regarding the newsletter or would like to receive e-mail notification contact our editor, Bridget Konz, at [bkonz@idph.state.ia.us](mailto:bkonz@idph.state.ia.us).

## Immunization Law Changes go Into Effect, *Continued*

**The Certificate of Immunization Exemption** has been changed to allow medical professionals (MD, DO, PA, ARNP) to provide a medical exemption when administering a dose of live vaccine (e.g., varicella or MMR vaccine) would violate minimum interval spacing as recommended by the Advisory Committee on Immunization Practices (ACIP). In this circumstance, an exemption shall apply only to an applicant who has not received prior doses of the exempted vaccines.

For example: a child needs first doses of both Varicella & MMR. Inadvertently, only varicella is given at the visit. The MMR must be given at least 28 days from the Varicella (required minimum interval for 2 live vaccines) and a provisional certificate can not be issued because the child does not have one dose of each of the required vaccines (MMR). Therefore, in this example, a medical exemption can be provided for

the 28 day minimum interval between the varicella and MMR.

**The Provisional Certificate of Immunization** has been changed to include the statement that the person signing the provisional certificate (MD, DO, PA, nurse, or CMA) has informed the applicant, parent or guardian of the provisional enrollment requirements. The parent or guardian signature is no longer required on the Provisional Certificate of Immunization.

At the end of the provisional enrollment period (60 days or less) if the student has not completed the required vaccines due to a minimum interval requirement a new Provisional Certificate of Immunization must be issued.

The admitting official of the school or licensed child care center must

maintain all Provisional Certificates of Immunization for that student until they are able to present a Certificate of Immunization.

Providers are to immediately begin using the revised Certificate of Immunization and Provisional Certificate of Immunization. Existing completed certificates remain valid and do not need to be transferred to the new certificates. Copies of the new certificates are available on the IDPH Immunization Program Web page and will soon be available for bulk order from the Health Protection Clearinghouse by calling 888-398-9696.

The final published version of Chapter 7 can be found on our Web site:

<http://www.idph.state.ia.us/adper/immunization.asp> under "Iowa Immunization Administrative Code."

## Influenza-Nothing to Sneeze at!



The aches and pains, fever, congestion, headache, sore throat, and pneumonia, it's Influenza and it's preventable!

January is a great time to vaccinate Iowan's against seasonal influenza (flu)! Iowa's flu season typically peaks in February and last year extended through March into April.

It takes about two weeks for our bodies to build an immune response to flu after vaccination. Giving vaccine in January still ensures you and your

patients will be protected at the height of flu season. The Vaccines for Children (VFC) Program still has plenty of flu vaccine available for eligible children.

Remember that MedImmune, the maker of FluMist, offers a replacement program for vaccine that is outdated. For information on receiving additional VFC flu vaccine or replacement of FluMist, contact Tina Patterson at 800-831-6263, ext 4.

For additional information about influenza vaccination, visit the following Web sites. They are continually updated with the latest resources:

**The National Influenza Vaccine Summit Web site:**

<http://www.preventinfluenza.org>

**CDC's Seasonal Flu Web section:**

<http://www.cdc.gov/flu>

**IDPH Influenza Web site:**

<http://www.idph.state.ia.us/adper/flu.asp>

## The 2nd Edition "Vaccine Handbook: A Practical Guide for Clinicians"

The "Purple Book" by Gary Marshall, MD, contains practical advice for the practitioner on vaccine infrastructure, standards and regulations, business aspects of vaccine practice, general recommendations, schedules, special circumstances, and how to address a patient's concerns about vaccines.

Specific information about vaccine-preventable diseases, the rationale for vaccine use, and available products is included. The book is targeted to pediatricians, family practitioners, internists, obstetricians, residents, nurse practitioners, and physician assistants. For ordering information, go to:

[http://www.pcibooks.com/book\\_info.php?id=49](http://www.pcibooks.com/book_info.php?id=49)

# The Problem with Dr. Bob's Alternative Vaccine Schedule



Dr. Paul Offit, MD

Moser, BS, appears in the January issue of *Pediatrics*, an American Academy of Pediatrics journal.

The article discusses misinformation published in *The Vaccine Book: Making the Right Decision for Your Child*, a book written by Robert W. Sears, MD.

Dr. Offit is the chief of Infectious Diseases and the director of the Vaccine Education Center at the Children's Hospital of Philadelphia, as well as the Maurice R. Hilleman Professor of Vaccinology and professor of pediatrics at the University of Pennsylvania School of Medicine. Ms. Moser is Dr.

"The Problem with Dr. Bob's Alternative Vaccine Schedule," an article written by Paul A. Offit, MD, and Charlotte A.

Offit's colleague at the Vaccine Education Center.

**Article abstract**  
2007, Dr. Robert Sears, son of the noted pediatrician and author, Dr. William Sears, in response to growing parental concerns about the safety of vaccines, published *The Vaccine Book: Making the Right Decision for Your Child*. Dr. Sears' book is enormously popular, having sold more than 40,000 copies.

At the back of the book, Sears includes "Dr. Bob's Alternative Vaccine Schedule," a formula by which parents can delay, withhold, separate, or space out vaccines.

Pediatricians now confront many parents who insist that their children receive vaccines according to Sears' schedule, rather than that

In October

recommended by the American Academy of Pediatrics, the Centers for Disease Control and Prevention, and the American Academy of Family

"The popularity of Sears' book centers in part on 2 schedules, called alternative and selective, that offer parents a way to avoid giving their children several vaccines at one time. Sears' book is unique. Unlike typical antivaccine books, he offers a middle ground, allowing parents to act on their fears without completely abandoning vaccines. Unfortunately, Sears sounds many antivaccine messages." Excerpt from Dr. Offit's article.

Physicians. This article examines the reasons for the popularity of Dr. Sears' book, deconstructs the logic and rationale behind its recommendations, and describes how Dr. Sears' misrepresentation of vaccine science misinforms parents trying to make the right decisions for their children.

To access the full text of the Pediatrics article, go to:

<http://pediatrics.aappublications.org/cgi/reprint/123/1/e164>

## Video of the Week



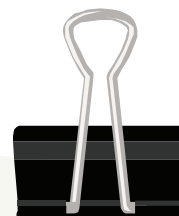
The Immunization Action Coalition (IAC) is one of the premier immunization information organizations in the United States. IAC has long been a valuable source of immunization information for clinicians and parents for free, reliable, science-based information on immunizations.

Recently IAC launched a new initiative on their Web site to help educate people on many of the vaccine preventable diseases we vaccinate against today. IAC uses personal stories of individuals and families who have lived through or been effected by these diseases.

Each Monday the Web page is updated with a new story. The current video of the week is produced by the CDC and Families Fighting Flu. A heart wrenching video documenting stories of families who have lost loved ones to Influenza. Recent videos include personal stories of Polio and a dying woman's urgent message of the important of the HPV vaccination.

Visit the IAC Web page: <http://www.immunize.org> and look for the Video of the Week on the main page.

## Cold Weather Shipping



Clinics are reminded that during times of extreme cold, vaccine will not be shipped because of the chance of exposure to freezing temperatures.

It is important for vaccine shipments to be opened immediately upon arrival to assure they have not been compromised during transport.

Questions related to vaccine ordering or shipments from McKesson can be directed to Janean Iddings or Tina Patterson at 800-831-6293, ext. 5 and 4 respectively.



## 2009 Changes to the Recommended Childhood Immunization Schedule

On January 2, 2009, the CDC published the "Recommended Immunization Schedules for Persons Aged 0 through 18 Years-United States, 2009" as endorsed by the CDC, AAP, and AAFP. The Advisory Committee on Immunization Practices (ACIP) annually publishes immunization schedules that summarize recommendations for currently licensed vaccines for children aged 18 years and younger. Changes from the previous schedule are as follows:

Recommendations for rotavirus vaccines include changes for the maximum age for the first dose (14 weeks 6 days) and the maximum age for any dose (8 months 0 days). The rotavirus footnote also indicates that if RV1 (Rotarix) is administered at ages 2 and 4 months, a dose at 6 months is not indicated.

Routine annual influenza vaccination is recommended for all children aged 6 months through 18 years. Children aged younger than 9 years who are receiving influenza vaccine for the first time or who were vaccinated for the first time during the previous season but only received 1 dose should receive 2 doses of influenza vaccine at least 4 weeks apart. Healthy non-pregnant persons aged 2 through 49 years may receive either live attenuated influenza vaccine or inactivated influenza vaccine.

The minimum interval between tetanus and diphtheria toxoids (Td) and tetanus and diphtheria toxoids and acellular pertussis vaccine (Tdap) for persons aged 10 through 18 years is addressed. An interval less than 5 years may be used if pertussis immunity is needed.

Information about the use of Haemophilus influenzae type b (Hib) conjugate vaccine among persons aged 5 years and older at increased risk for invasive Hib disease has been added. Use of Hib vaccine for these persons is not contraindicated.

Catch-up vaccination with human papillomavirus (HPV) vaccine is clarified. Routine dosing intervals

should be used for series catch-up (i.e., the second and third doses should be administered 2 and 6 months after the first dose). The third dose should be given at least 24 weeks after the first dose.

Abbreviations for rotavirus, pneumococcal polysaccharide, and meningococcal polysaccharide vaccines have been changed.

The National Childhood Vaccine Injury Act requires that healthcare providers provide parents or patients with copies of Vaccine Information Statements before administering each dose of the vaccines listed in the schedules. Additional information is available from CDC at

<http://www.cdc.gov/vaccines/pubs/vis>

Detailed recommendations for using vaccines are available from ACIP statements available at <http://www.cdc.gov/vaccines/pubs/acip-list.htm> and the 2006 Red Book.

Guidance regarding the Vaccine Adverse Event Reporting System form is available at <http://www.vaers.hhs.gov> or by telephone, (800) 822-7967.

To access a ready-to-print (PDF) version of this issue of MMWR which contains the schedule, go to: <http://www.cdc.gov/mmwr/PDF/wk/mm5751.pdf>

To access the "Recommended Immunization Schedules for Persons Aged 0 through 18 Years-United States, 2009" go to the following CDC Web site: <http://www.cdc.gov/vaccines/recs/schedules/default.htm>

## Mark Your Calendars!

The Iowa Statewide Immunization Conference will be held in Downtown Des Moines at the Hy-Vee Hall on

**June 11, 2009**

Our 2007 conference had more than 600 participants, making it one of the largest state immunization conferences in the nation! As a result, the IDPH Immunization Program has secured a new conference site to accommodate our growing attendance - Hy-Vee Hall in Downtown Des Moines (attached to Veterans Auditorium).

We are currently planning the conference and are pleased to bring national speakers to Iowa again, such as Dr. Paul Offit of the Children's Hospital of Philadelphia and Dr. Bill Atkinson of the CDC's National Immunization Program. Look for more information in the spring. See you there!

## CDC's Web cast: "Immunization Encounters"

Originally broadcast on December 18, 2008, CDC's Web cast "The Immunization Encounter: Critical Issues" is an outstanding resource for all healthcare professionals involved in any aspect of immunization delivery, from those who administer vaccine to those who set vaccine policy for their organizations. **A link to the Web cast will be available until January 20, 2009.** To access it, go to:

<http://www2a.cdc.gov/phtn/webcast/i-mm-encounter2008> The Web cast will become available as a self-study DVD and Internet-based program in 4-6 weeks after the Web cast. <http://www.cdc.gov/vaccines/ed>

## 2009 Changes to the Recommended Adult Immunization Schedule

The Advisory Committee on Immunization Practices (ACIP) annually reviews the recommended Adult Immunization Schedule to ensure that the schedule reflects current recommendations for the licensed vaccines.

In October 2008, ACIP approved the Adult Immunization Schedule for 2009. No new vaccines were added to the schedule. However, several indications were added to the pneumococcal polysaccharide vaccine footnote; clarifications were made to the footnotes for human papillomavirus, varicella, and meningococcal vaccines; and schedule information was added to the hepatitis A and hepatitis B vaccine footnotes.

This schedule has also been approved by the American Academy of Family Physicians (AAFP), American College of Obstetricians and Gynecologists (ACOG), and American College of Physicians (ACP).

### CHANGES IN THE ADULT SCHEDULE FOR 2009

The 2009 schedule differs from the previous schedule as follows: To make the schedule easier to understand, several formatting changes were implemented to both the age group-based schedule and the medical and other indications schedule. The changes include 1) increasing the number of age groups; 2) deleting the hatched yellow bar for tetanus, diphtheria, pertussis (Td/Tdap) vaccine and adding explanatory text to the Td/Tdap bar; 3) simplifying the figures by removing schedule text from the vaccine bars; 4) revising the order of the vaccines to more appropriately group the vaccines; and 5) adding a legend box to clarify the meaning of blank spaces in the table.

The human papillomavirus (HPV) footnote (footnote 2) has been revised to include language indicating that health care personnel are not at increased risk due to occupational exposure but they should be vaccinated consistent with age-based recommendations.

The varicella footnote (footnote 3) has been revised to clarify that adults who

previously received only 1 dose of vaccine should receive a second dose.

Asthma and cigarette smoking have been added as indications for pneumococcal polysaccharide vaccination (footnote 7). Text has also been added to clarify vaccine use in Alaska Natives and American Indians.

The hepatitis A footnote (footnote 9) has been revised to include additional schedule information for the 4-dose combined hepatitis A/hepatitis B vaccine.

The hepatitis B footnote (footnote 10) has been revised to include additional schedule information for the 4-dose combined hepatitis A/hepatitis B vaccine and a clarification of schedule information for special formulation indications has been added.

The meningococcal vaccine footnote (footnote 11) has been revised to clarify that the revaccination interval is 5 years.

General information about adult vaccination is available at [www.cdc.gov/vaccines/default.htm](http://www.cdc.gov/vaccines/default.htm)

ACIP statements for specific vaccines are available at [www.cdc.gov/vaccine/pubs/acip-list.htm](http://www.cdc.gov/vaccine/pubs/acip-list.htm)

Instructions for reporting adverse events to the Vaccine Adverse Event Reporting System are available at [www.vaers.hhs.gov](http://www.vaers.hhs.gov) or by telephone (800-822-7967).

To access the Adult Immunization Schedule in English and Spanish go to the following CDC Web site:  
[www.cdc.gov/vaccines/recs/schedules/adult-schedule.htm](http://www.cdc.gov/vaccines/recs/schedules/adult-schedule.htm)

Source: 6 January 2009, Annals of Internal Medicine, Volume 150 • Number 1

## Boostrix® Now for Ages 10-64



On December 4 2008, the Federal Drug Administration (FDA) approved GlaxoSmithKline's (GSK) request to supplement the biologics license application for the tetanus-diphtheria-acellular pertussis (Tdap) vaccine Boostrix.

The vaccine is now approved for use as a one-time booster for people ages 10-64 years. Previously, it was approved for use only in people ages 10-18 years.

To access the December 4, 2008, FDA approval letter, go to:  
<http://www.fda.gov/cber/approvltr/tdapboostrix120408L.htm>

To view an updated package insert (dated December 2008) posted on the GSK website, go to:  
[http://us.gsk.com/products/assets/us\\_boostrix.pdf](http://us.gsk.com/products/assets/us_boostrix.pdf)



IRIS Helpdesk 800-374-3958

## Pedvax<sup>®</sup> Hib Shortage Continues

The national vaccine supply continues to experience a shortage of haemophilus influenzae B vaccine (Hib) PedvaxHIB manufactured by Merck. As a result, the IDPH Immunization Program continues to review and fill limited orders with ActHIB or Hib-containing Pentacel both manufactured by sanofi pasteur.

Due to the on-going Hib shortage, providers should continue to defer the booster dose of Hib-containing vaccine at the 12-15 month visit. Additionally, it is critical to keep up-to-date documentation of children who are deferred so that recall reminders can be made once the shortage is over.

The Iowa Department of Public Health has extended the "Hib Waiver" that allows children to attend a licensed child care center without the booster dose of Hib from December 31, 2008, to September 30, 2009. It is anticipated the Hib shortage will resolve prior to September. For copies of the Hib Waiver go to:

[http://www.idph.state.ia.us/adper/common/pdf/immunization/hib\\_waiver.pdf](http://www.idph.state.ia.us/adper/common/pdf/immunization/hib_waiver.pdf)

If you have questions regarding vaccine availability please contact Janean Iddings at 1-800-831-6293, ext. 5, or for vaccine questions please contact Terri Thornton or Bridget Konz at 1-800-831-6293, ext. 2 and 7 respectively.

## Documenting Vaccine with Multiple Lot Numbers

On October 3, 2008, a Notice to Readers was published in the MMWR that said: "Different lot numbers for the different components of DTaP-IPV/Hib are included on the DTaP-IPV vial and on the Hib powder vial. Providers should record lot numbers separately for the DTaP-IPV and Hib components."

After review of the MMWR recommendations, the Iowa VFC Program recommends that providers only record the one lot number that appears on the Pentacel box.

Pentacel is supplied as a box containing 5 vials of liquid DTaP-IPV vaccine and 5 vials of lyophilized Hib vaccine. The vaccine component should be kept together in the original box until one vial of each component is removed, reconstituted, and administered. The combined vaccine must be used within 30 minutes of reconstitution.

Pentacel should always be used as a combination vaccine. The individual adjuvant should never be used separately. The liquid DTaP-IPV vaccine should be used only to reconstitute the lyophilized Hib component, and the combined vaccine administered to an individual child.

The lot numbers of the Pentacel components are linked so that the lot number of one component will identify the lot number of the other component.

For questions regarding lot numbers of specific vaccines, please call Janean Iddings at 800-831-6293, ext. 5 or the IRIS Helpdesk at 800-374-3958.

For questions regarding the use of vaccines with multiple components contact Terri Thornton or Bridget Konz at 800-831-6293, ext. 2 and 7 respectively.



If brands of HIB are changed during the vaccine series, a 3 dose primary series is required (2, 4, 6 months of age) with a booster (12-15 months of age).

After completing the primary series, any Hib conjugate vaccine can be used for the booster dose at 12-15 months of age once the shortage recommendations are over.

## Don't Send It!

Non-viable vaccine returns to McKesson should include only spoiled or expired vaccines, in their original vials or pre-filled syringes.

**FRAGILE**  
HANDLE WITH CARE

Returns should **NEVER** include:

- Used syringes, with or without needles;
- Broken vials;
- Wasted products such as a syringe that was drawn up but not used;
- or Multidose vial from which some doses have already been withdrawn





## Recommended Regimen for Pneumococcal Conjugate Vaccine Among Children With a Lapse in Vaccine Administration

How to use this chart:

1. Locate the child's age in the left column.
2. In the row with the child's age, locate the number of previous doses of PCV received.
3. The corresponding cell to the right of the number of previous doses in the "recommended regimen" column provides the recommended number of doses for the child.

Child's age now	Previous pneumococcal conjugate vaccination	Recommended regimen	Total doses in the series
<b>2 through 6 months</b>	0 doses	Give 3 doses 2 months apart. The 4th dose will be given at 12-15 months as the final dose	4
	1 dose	Give 2 doses 2 months apart. The 4th dose will be given at 12-15 months as the final dose	4
	2 doses	Give 1 dose. The 4th dose will be given at 12-15 months as the final dose	4
<b>7 through 11 months</b>	0 doses	Give 2 doses 2 months apart, 3rd dose at 12-15 months as the final dose	3
	1 or 2 doses before age 7 months	Give 1 dose at 7-11 months, with another dose at 12-15 months (> 2 months later) as the final dose	3 or 4
<b>12 through 23 months</b>	0 doses	Give 2 doses > 2 months apart as the final dose	2
	1 dose before age 12 months	Give 2 doses > 2 months apart as the final dose	3
	2 doses before age 12 months	Give 1 dose > 2 months after the most recent dose as the final dose	3
	1 dose on or after age 12 months	Give 1 dose > 2 months after the most recent dose as the final dose	2
<b>24 through 59 months</b>	No previous doses	Give one dose as the single and final dose.	1
	If 1, 2 or 3 doses before 12 months	Give 1 dose > 2 months after the most recent dose as the final dose	2,3, or 4
	If 1 dose between 12-23 months	Give 1 dose > 2 months after the most recent dose as the final dose	2
	If 2 doses between 12-23 months (separated by at least 2 months)	No additional doses. Child is complete.	2
	If 1, 2, or 3 doses before 12 months and 1 dose between 12-23 months (separated by at least 2 months)	No additional doses. Child is complete.	2,3, or 4
	If 1 dose after 24 months	No additional doses. Child is complete.	1

For children with high-risk conditions consult the Pink Book (*Epidemiology and Prevention of Vaccine-Preventable Diseases*) or Red Book.

## IMMUNIZATION REQUIREMENTS

Applicants enrolled or attempting to enroll shall have received the following vaccines in accordance with the doses and age requirements listed below. If, at any time, the age of the child is between the listed ages, the child must have received the number of doses in the "Total Doses Required" column.

Institution	Age	Vaccine	Total Doses Required
Licensed Child Care Center	Less than 4 months of age	This is not a recommended administration schedule, but contains the minimum requirements for participation in licensed child care. Routine vaccination begins at 2 months of age.	
	4 months through 5 months of age	Diphtheria/Tetanus/Pertussis	1 dose
		Polio	1 dose
		haemophilus influenzae type B	1 dose
		Pneumococcal	1 dose
	6 months through 11 months of age	Diphtheria/Tetanus/Pertussis	2 doses
		Polio	2 doses
		haemophilus influenzae type B	2 doses
		Pneumococcal	2 doses
	12 months through 18 months of age	Diphtheria/Tetanus/Pertussis	3 doses
		Polio	2 doses
		haemophilus influenzae type B	2 doses; or 1 dose received when the applicant is 15 months of age or older.
		Pneumococcal	3 doses if the applicant received 1 or 2 doses before 12 months of age; or 2 doses if the applicant has not received any previous doses or has received 1 dose on or after 12 months of age.
	19 months through 23 months of age	Diphtheria/Tetanus/Pertussis	4 doses
		Polio	3 doses
		haemophilus influenzae type B	3 doses, with the final dose in the series received on or after 12 months of age, or 1 dose received when the applicant is 15 months of age or older.
		Pneumococcal	4 doses; or 3 doses if the applicant received 1 or 2 doses before 12 months of age; or 2 doses if the applicant has not received any previous doses or has received 1 dose on or after 12 months of age.
		Measles/Rubella <sup>1</sup>	1 dose of measles/rubella-containing vaccine received on or after 12 months of age; or the applicant demonstrates a positive antibody test for measles and rubella from a U.S. laboratory.
	24 months and older	Varicella	1 dose received on or after 12 months of age if the applicant was born on or after September 15, 1997, unless the applicant has had a reliable history of natural disease.
		Diphtheria/Tetanus/Pertussis	4 doses
		Polio	3 doses
		haemophilus influenzae type B	3 doses, with the final dose in the series received on or after 12 months of age; or 1 dose received when the applicant is 15 months of age or older. Hib vaccine is not indicated for persons 60 months of age or older.
		Pneumococcal	4 doses if the applicant received 3 doses before 12 months of age; or 3 doses if the applicant received 2 doses before 12 months of age; or 2 doses if the applicant received 1 dose before 12 months of age or received 1 dose between 12 and 23 months of age; or 1 dose if no doses had been received prior to 24 months of age. <b>Pneumococcal vaccine is not indicated for persons 60 months of age or older.</b>
		Measles/Rubella <sup>1</sup>	1 dose of measles/rubella-containing vaccine received on or after 12 months of age; or the applicant demonstrates a positive antibody test for measles and rubella from a U.S. laboratory.
		Varicella	1 dose received on or after 12 months of age if the applicant was born on or after September 15, 1997, unless the applicant has had a reliable history of natural disease.
Elementary or Secondary School (K-12)	4 years of age and older	Diphtheria/Tetanus/Pertussis <sup>2,3,4</sup>	3 doses, with at least 1 dose of diphtheria/tetanus/pertussis-containing vaccine received on or after 4 years of age if the applicant was born on or before September 15, 2000; or 4 doses, with at least 1 dose of diphtheria/tetanus/pertussis-containing vaccine received on or after 4 years of age if the applicant was born after September 15, 2000, but before September 15, 2003; or 5 doses with at least 1 dose of diphtheria/tetanus/pertussis-containing vaccine received on or after 4 years of age if the applicant was born on or after September 15, 2003. DTaP is not indicated for persons 7 years of age and older.
		Polio <sup>5,6</sup>	3 doses, with at least 1 dose received on or after four years of age if the applicant was born on or before September 15, 2003; or 4 doses, with at least 1 dose received on or after four years of age if the applicant was born after September 15, 2003.
		Measles/Rubella <sup>1</sup>	2 doses of measles/rubella-containing vaccine; the first dose shall have been received on or after 12 months of age; the second dose shall have been received no less than 28 days after the first dose; or the applicant demonstrates a positive antibody test for measles and rubella from a U.S. laboratory.
		Hepatitis B	3 doses if the applicant was born on or after July 1, 1994.
		Varicella <sup>7</sup>	1 dose received on or after 12 months of age if the applicant was born on or after September 15, 1997, but born before September 15, 2003, unless the applicant has had a reliable history of natural disease; or 2 doses received on or after 12 months of age if the applicant was born on or after September 15, 2003, unless the applicant has a reliable history of natural disease.

<sup>1</sup> Mumps vaccine may be included in measles/rubella-containing vaccine.

<sup>2</sup> The 5<sup>th</sup> dose of DTaP is not necessary if the 4<sup>th</sup> dose was administered on or after 4 years of age.

<sup>3</sup> Applicants 7 through 18 years of age who received their 1<sup>st</sup> dose of diphtheria/tetanus/pertussis-containing vaccine before 12 months of age should receive a total of 4 doses, with one of those doses administered on or after 4 years of age.

<sup>4</sup> Applicants 7 through 18 years of age who received their 1<sup>st</sup> dose of diphtheria/tetanus/pertussis-containing vaccine at 12 months of age or older should receive a total of 3 doses, with one of those doses administered on or after 4 years of age.

<sup>5</sup> If an applicant, born after September 15, 2003, received an all-inactivated poliovirus (IPV) or all-oral poliovirus (OPV) series a 4<sup>th</sup> dose is not necessary if the 3<sup>rd</sup> dose was administered on or after 4 years of age.

<sup>6</sup> If 4 polio doses are administered at greater than 6 weeks of age and the doses are all separated by at least 4-week intervals, a 5<sup>th</sup> dose is not needed, even if the 4<sup>th</sup> dose was administered before 4 years of age.

<sup>7</sup> If both OPV and IPV were administered as part of the series, a total of 4 doses are required, regardless of the applicant's current age.

<sup>8</sup> Administer 2 doses of varicella vaccine, at least 3 months apart, to applicants less than 13 years of age. Do not repeat the 2<sup>nd</sup> dose if administered 28 days or greater from the 1<sup>st</sup> dose. Administer 2 doses of varicella vaccine to applicants 13 years of age or older at least 4-weeks apart. The minimum interval between the 1<sup>st</sup> and 2<sup>nd</sup> dose of varicella for an applicant 13 years of age or older is 28 days.